

REMARKS

The Office Action dated May 23, 2005, has been received and reviewed.

Claims 17-34 are currently pending and under consideration in the above-referenced application, each standing rejected.

Reconsideration of the above-referenced application is respectfully requested.

Claim Amendments

Claim 18 has been amended to depend from claim 17 rather than from claim 1, which has been canceled without prejudice or disclaimer. The prior dependency of claim 18 was merely a typographical error. The revision of claim 18 does not change its scope, the scope of claim 17, from which claim 17 now depends, or the scope of any of the other claims that remains pending in the above-referenced application.

Claim 29 has been amended to replace the term “support” to “platen” to avoid confusion between the “support structure” formed on the active surface of a semiconductor device and the “support” to which the semiconductor substrate and support structure are secured. Additionally, claim 29 has been revised to recite that the “at least one feature or structure” is “of or on” the platen, rather than merely “of” the platen. As “support” and “platen” are synonymous terms, and since “of or on” is broader than “of,” the revisions to claim 29 do not narrow the scope of claim 29 or of any of the other claims that remains pending in the above-referenced application.

Rejections Under 35 U.S.C. § 102

Claims 17-20 stand rejected under 35 U.S.C. § 102(b) for reciting subject matter which is purportedly anticipated by the subject matter described in U.S. Patent 5,869,354 to Leedy et al. (hereinafter “Leedy”).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Independent claim 17 is directed to a method for thinning a semiconductor substrate. The method of independent claim 17 includes forming a support structure on an active surface of the semiconductor substrate and removing material from a back side of the semiconductor substrate.

In contrast, the description of Leedy is limited to etching the back side 14 of a silicon substrate 10 to remove material therefrom, then, after etching, forming a retaining frame (or ring) 18 on the back side 14. *See* col. 7, lines 48-60; *see also* Fig. 1a. Leedy does not expressly or inherently describe that the retaining frame (or ring) 18 may be formed on an active surface of the silicon substrate 10. Therefore, Leedy does not anticipate “forming a support structure on an active surface of [a] semiconductor substrate,” as would be required to maintain the 35 U.S.C. § 102(b) rejection of independent claim 17.

Claims 18-20 are each allowable, among other reasons, for depending directly or indirectly from claim 17, which is allowable.

Claim 19 is further allowable because Leedy lacks any express or inherent description that semiconductor devices that have been fabricated on an active surface of the silicon substrate 10 disclosed therein are located within an inner periphery of the retaining frame (or ring) 18. In addition, semiconductor devices that are fabricated on the active surface of the silicon substrate 10 described in Leedy cannot be exposed through the retaining frame (or ring) 18 thereof, as the retaining frame (or ring) 18 is formed on the back side 14 of the silicon substrate 10, not on the active surface thereof. Thus, Leedy does not anticipate “forming [a] support ring such that each semiconductor device that has been fabricated on [an] active surface is located within an inner periphery of the support ring and is exposed therethrough,” as recited in claim 19

Claim 20 is additionally allowable since Leedy does not expressly or inherently describe that the retaining frame (or ring) 18 disclosed therein may be formed by forming a layer of packaging material over the active surface of the silicon substrate 10.

It is respectfully requested that the 35 U.S.C. § 102(b) rejections of claims 17-20 be withdrawn.

Rejections Under 35 U.S.C. § 103(a)

Claims 21-34 stand rejected under 35 U.S.C. § 103(a) for reciting subject matter which is allegedly unpatentable over the subject matter taught in Leedy, in view of teachings from U.S. Patent 6,562,661 to Grigg (hereinafter "Grigg").

The standard for establishing and maintaining a rejection under 35 U.S.C. § 103(a) is set forth in M.P.E.P. § 706.02(j), which provides:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Each of claims 21-34 is allowable, among other reasons, for depending directly or indirectly from claim 17, which is allowable.

Moreover, it is respectfully submitted that the teachings of Leedy and Grigg do not support a *prima facie* case of obviousness against any of claims 21-34.

Specifically, it is respectfully submitted that one of ordinary skill in the art would have no reason to expect that the asserted combination of reference teachings would be successful. That is because, while Leedy and Grigg teach frames, rings, and stiffeners for supporting thin or flexible substrates, neither of these reference teaches or suggests forming a support structure on an active surface of a semiconductor device. Rather, Leedy merely teaches forming retaining frames (or rings) 18 on the back sides 14 of silicon substrates 10, while the teachings of Grigg are limited to forming or securing stiffeners to flexible dielectric substrates.

Claim 28 is also allowable since neither Leedy nor Grigg teaches or suggests molding a support structure on an active surface of a semiconductor substrate.

Claim 29 is additionally allowable since Leedy and Grigg both lack any teaching or suggestion of securing a semiconductor substrate to a support with an active surface of the

semiconductor substrate facing the support and a support structure that has been formed on the active surface abutting at least one surface or feature of the support.

Withdrawal of the 35 U.S.C. § 103(a) rejections of claims 21-34 is respectfully requested.

CONCLUSION

It is respectfully submitted that each of claims 17-34 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



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